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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,233	11/14/2003	Don G. Bartell	CML00844T (78933)	2477
22242	7590	08/11/2004	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			CHAU, COREY P	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,233

Applicant(s)

BARTELL, DON G.

Examiner

Corey P Chau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/14/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/14/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/03/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: Fig. 7, reference 72. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1, 2, 3, 4, 5, 6, 7, 17, 18, 19, 21, and 23 are objected to because of the following informalities: On line 1 of each claim recites, "and further comprising" should be replaced with "further comprising". Appropriate correction is required.

Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 3, 4, 5, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, and 29 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent Application Publication No. US 2003/0109286 to Hack et al. (hereafter as Hack).

5. Regarding Claim 1, Hack discloses an intelligent multi-media display communication system comprising a flexible active display (110); and a flexible audio transducer (123) proximally disposed with respect to the flexible active display (Fig. 2).

6. Regarding Claim 2, Hacks discloses a flexible substrate that supports both the flexible active display and the flexible audio transducer (i.e. the display system 106 is fabricated on a flexible substrate) (Fig. 2; page 5, paragraph 0051 and 0052; page 6, paragraph 0066).

7. Regarding Claim 3, Hacks discloses comprising at least a second flexible audio transducer (121) proximally disposed with respect to the flexible active display (Fig. 2)

8. Regarding Claim 4, Hacks discloses a flexible substrate that supports the flexible active display, the flexible audio transducer, and the at least a second

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flexible audio transducer (i.e. the display system 106 is fabricated on a flexible substrate) (Fig. 2; page 5, paragraph 0051 and 0052; page 6, paragraph 0066).

9. Regarding Claim 5, Hacks discloses a plurality of flexible audio transducers (121,123) disposed substantially equidistant from one another about the flexible active display (Fig. 2).

10. Regarding Claim 14, Hack discloses a flexible audio transducer (123), wherein the flexible audio transducer is a thin film audio transducer that is thin enough and flexible enough so that the collapsible nature of the display is unaffected, but only generally; no specific hardware is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known flexible audio transducers. SRI International for example discloses dielectric elastomer electroactive polymer materials for use in a variety of applications, such as loudspeakers (i.e. audio transducer) comprising films of dielectric elastomer polymer, coated on both sides with a compliant electrode material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any known flexible speaker, such as that of SRI International. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flexible speaker of Hack with the teaching of SRI International to utilize a flexible audio transducer comprising films of dielectric elastomer polymer, coated on both sides with a compliant electrode material (i.e. flexible audio transducer is comprised of at least one layer of a dielectric elastomer polymer material).

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11. All elements of Claim 15 are comprehended by Claim 14. Claim 15 is rejected for the reasons stated above apropos to Claim 14.

12. All elements of Claim 16 are comprehended by Claim 14. Claim 16 is rejected for the reasons stated above apropos to Claim 14.

13. Regarding Claim 17, Hack discloses a selective rigidizer (113) disposed proximal to the flexible audio transducer (i.e. the rod 113 support the display system vertical) (Fig. 2).

14. Regarding Claim 18, Hack discloses a rigid backing disposed at least partially coextensively with the flexible audio transducer (i.e. it is contemplated that the display substrate can be formed from a smart material that is flexible when the display 106 is retracted, but becomes rigid when the display 10 is extended)(page 5, paragraph 0051) .

15. Regarding Claim 19, Hack discloses a housing (102) and a retraction mechanism (113) disposed therein that is operably coupled to the flexible active display and the flexible audio transducer (Figs. 2 and 3A-C; page 5, paragraphs 0056 and 0058).

16. Regarding Claim 20, Hack discloses a method of forming a flexible combined display and speaker apparatus (i.e. intelligent multi-media display communication system)(Fig. 2), comprising: providing a flexible substrate (i.e. the display system 106 is fabricated on a flexible substrate); providing a flexible active display (110) in association with the flexible substrate; providing a flexible speaker (123) in association with the flexible substrate (Fig. 2; page 5, paragraph 0051 and 0052; page 6, paragraph 0066).

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17. Regarding Claim 21, Hack discloses temporarily disposing the flexible substrate, and hence the flexible active display and the flexible speaker, in a non-planar configuration (Figs. 3A-C; page 5, paragraphs 0056 and 0058).
18. All elements of Claim 22 are comprehended by Claim 21. Claim 22 is rejected for the reasons stated above apropos to Claim 21.
19. All elements of Claim 23 are comprehended by Claim 21. Claim 23 is rejected for the reasons stated above apropos to Claim 21.
20. Regarding Claim 24, Hack discloses folding the flexible substrate (i.e. alternatively, the display 106 can be formed such that it can be folded like a map and attached to either the interior or exterior of the housing 102) (page 5, paragraph 0056).
21. Regarding Claim 25, Hack discloses an integrated display and speaker (i.e. intelligent multi-media display communication system)(Fig. 2) comprising: flexible display (110) means for selectively providing an active display on a conformably flexible display surface; flexible speaker means (123) integrally configured with respect to the flexible display means for selectively providing audible sound (Fig. 2).
22. Claim 26 is essentially similar to Claim 14 and is rejected for the reasons stated above apropos to Claim 14.
23. Claim 27 is essentially similar to Claim 15 and is rejected for the reasons stated above apropos to Claim 15.
24. Claim 28 is essentially similar to Claim 16 and is rejected for the reasons stated above apropos to Claim 16.

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25. All elements of Claim 29 are comprehended by Claims 14 and 16. Claim 29 is rejected for the reasons stated above apropos to Claims 14 and 16.

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 6, 8, 9, 10, 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. US 2003/0109286 to Hack in view of U.S. Patent Application Publication No. US 2003/0222334 to Ikeda et al. (hereafter as Ikeda).

28. Regarding Claim 6, Hacks discloses a flexible active display and a flexible audio transducer on a flexible substrate, but does not expressly disclose a first flexible substrate that supports the flexible active display, and a second flexible substrate that supports the flexible audio transducer. However it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a first and second flexible substrates in order to provide desired structural properties for the flexible active display and the flexible audio transducer, as taught by Ikeda (page 5, paragraph 66).

29. Regarding Claims 8, 9, 10, and 11, Hacks as modified discloses a dampener, but does not expressly disclose the dampener comprises a vacuum,

or a discontinuous material, wherein the discontinuous material comprises a woven structure or a plurality of holes disposed through the material. However it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize any known types of dampener such as a vacuum, or a discontinuous material, wherein the discontinuous material comprises a woven structure or a plurality of holes disposed through the material.

30. Regarding Claims 12 and 13, Hacks as modified discloses a first and second flexible substrate, but does not expressly discloses the first and second flexible substrate comprising a similar material or difference material. However it would have been obvious one having ordinary skill in the art at the time the invention was made to provide the first and second flexible substrate comprising a similar material or difference material in order to provide desired structural properties.

31. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. US 2003/0109286 to Hack in view of U.S. Patent Application Publication No. US 2003/0222334 to Ikeda as applied to claims 6, 8, 9, 10, 11, 12, and 13 above, and further in view of U.S. Patent No. 6215655 to Heady et al. (hereafter as Heady).

32. Regarding Claim 7, Hacks as modified does not expressly discloses an acoustic dampener coupled between the first flexible substrate and the second flexible substrate. However it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide such a dampener between the first flexible substrate and the second flexible substrate in order to

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reduce vibration caused by flexible audio transducer therefore reducing communication interference, as taught by Heady (abstract; claim 11)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P Chau whose telephone number is (703)305-0683. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER

August 9, 2004